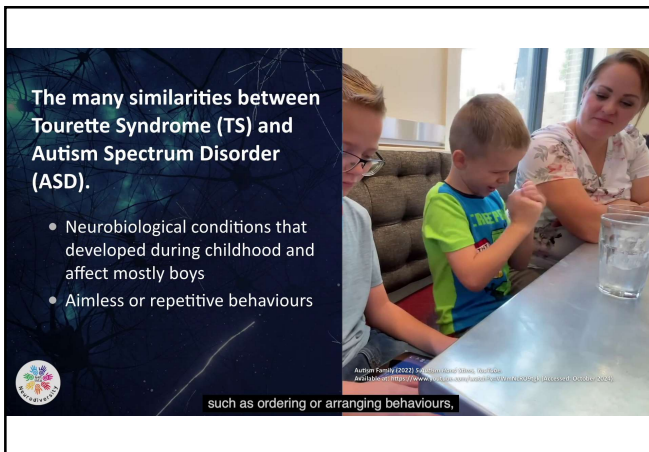


**Tourettes Toolkit Session 5:
The Co-occurrence of Tourettes
with Other Cognitive Conditions**

A practical and supportive approach to
understanding Tourettes Syndrome.

Presented by Liz Dunoon and Jillian Zocher

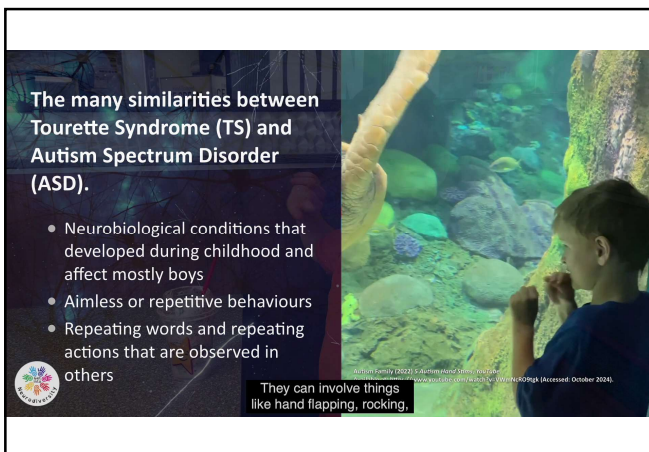
we are going to be covering the co-occurrence of
Tourette's with other cognitive



**The many similarities between
Tourette Syndrome (TS) and
Autism Spectrum Disorder
(ASD).**

- Neurobiological conditions that developed during childhood and affect mostly boys
- Aimless or repetitive behaviours

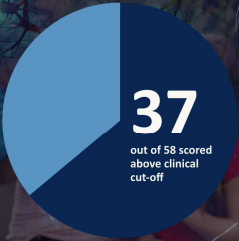
such as ordering or arranging behaviours.



**The many similarities between
Tourette Syndrome (TS) and
Autism Spectrum Disorder
(ASD).**

- Neurobiological conditions that developed during childhood and affect mostly boys
- Aimless or repetitive behaviours
- Repeating words and repeating actions that are observed in others

They can involve things
like hand flapping, rocking.




37
out of 58 scored above clinical cut-off

Case Study

- Had major social interactive difficulties
- Lack the ability to adjust to expectations or demands by peers
- Did not notice obvious negative reactions of those around them

and they didn't notice obvious negative reactions of their peers either.





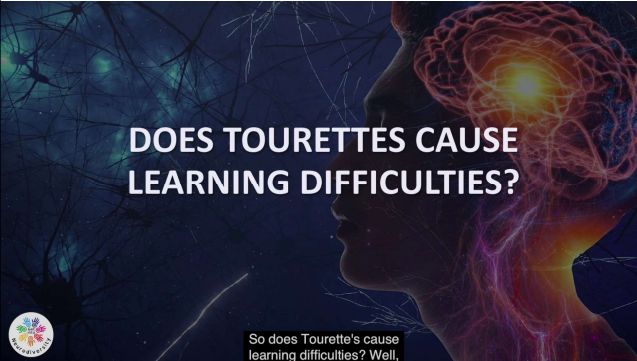
5-10%

Case Study

When individuals with intellectual disability only, are studied, the prevalence of tics is reported to be around **5-10%**.


consistent with the literature on Autism and Tic Disorder,






DOES TOURETTES CAUSE LEARNING DIFFICULTIES?

So does Tourette's cause learning difficulties? Well,



Factors used on how Tourettes cause Learning Difficulties.

- The age of the participants
- Their gender
- Their biological age at the onset of the tic disorder
- The seriousness of the tic disorder
- The comorbidity of ADHD or ASD
- Family genetics
- Birth events
- Trauma
- Cognitive development



Several ways Tic Disorders affect Learning and Cognitive Performance

These include:

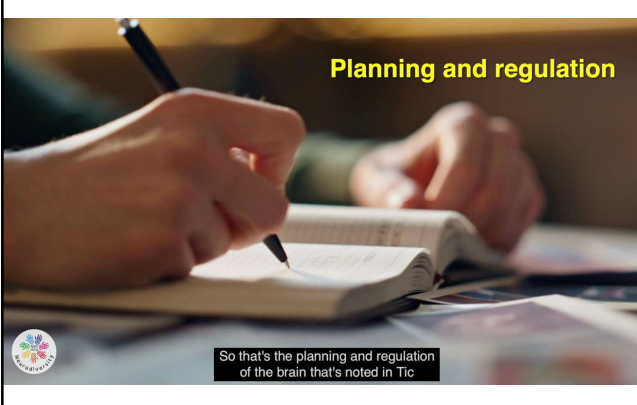
1. Deficits that are integral to tic disorders.
2. Deficits arising from efforts at tic suppression.
3. Deficits resulting from compensatory mechanisms (neural and otherwise).
4. Factors that affect neuropsychological test performance such as fluctuations in cognitive performance due to the waxing and waning course of a tic disorder.
5. Effect of medication, such as sedation and cognitive slowing.
6. The impact of comorbidities.

TOURETTES
SYNDROME

Coexistent problems:
Anxiety,
depression &
low self-esteem

AUTISM
ADHD
DYSLEXIA
DYSCALCULIA
OCD
OCB
and more.

And the final one will be the impact of comorbidities, which is the overlap.



Planning and regulation

So that's the planning and regulation of the brain that's noted in Tic
